

# Memorandum



CITY OF DALLAS

DATE February 28, 2014

TO The Honorable Mayor and Members of the City Council

SUBJECT City's Infrastructure Assessment Briefing March 5, 2014

On Wednesday, March 5, 2014, the City Council will be briefed on the City's Infrastructure Assessment. The briefing materials are attached for your review.

Please let me know if you have questions or need additional information.

A handwritten signature in black ink, appearing to read 'Jill Jordan'.

Jill A. Jordan, P.E.  
Assistant City Manager

## Attachment

c: The Honorable Mayor and Members of the City Council  
A.C. Gonzalez, City Manager  
Warren M. S. Ernst, City Attorney  
Rosa A. Rios, City Secretary  
Judge Daniel F. Solis, Administrative Judge  
Craig D. Kinton, City Auditor  
Ryan S. Evans, Interim First Assistant City Manager  
Forest E. Turner, Assistant City Manager  
Joey Zapata, Assistant City Manager  
Charles M. Cato, Interim Assistant City Manager  
Theresa O'Donnell, Interim Assistant City Manager  
Jeanne Chipperfield, Chief Financial Officer  
Frank Libro, Public Information Officer  
Elsa Cantu, Assistant to the City Manager- Mayor and Council Office  
Rick Galceran, P.E., Director, Public Works Department

# City's Infrastructure Assessment

Presented to  
Dallas City Council

March 5, 2014



# Introduction

- Meant to be first of a series of briefings:
  - The state of the City's infrastructure
  - What is needed to address deficiencies
- Some already presented to Committees:
  - Cultural facilities needs inventory update
  - Status of street condition and repair work

# Purpose

- Show the extent of infrastructure needs
- Outline a process to address these needs
- Raise policy questions



# Outline

- Infrastructure types
- Needs Inventory List
- General Fund Infrastructure
  - Streets, Bridges & Alleys
  - Flood Protection and Storm Drainage
  - City Hall, Cultural, Library, Public Safety and Service/Maintenance Facilities
  - Park Facilities
  - Radio Communication Facilities
- Enterprise Fund Infrastructure
  - Dallas Water Utilities [DWU] water & wastewater pipeline & treatment plants
  - Aviation Facilities
  - Convention Center Facilities
- Policy Questions and Guidance

# Infrastructure Types by Funding Sources

- **General Fund Infrastructure**

Financed with commercial paper and general obligation bonds supported by ad valorem tax

- Streets, Bridges & Alleys
- Flood Protection and Storm Drainage
- City Hall, Cultural, Library, Public Safety & Service/Maintenance Facilities
- Park Facilities
- Radio Communication Facilities

- **Enterprise Fund Infrastructure**

Financed with cash, commercial paper and revenue bonds supported by revenue from services

- DWU water and wastewater pipeline & treatment plants
- Aviation Facilities
- Convention Center Facilities

# Infrastructure Types by Funding Sources

- **Other** – (Not to be discussed in this briefing)
  - Grants
  - Private Development
  - Donations
  - Intergovernmental Partnerships
  - Impact Fees

# Infrastructure Needs

- **New Construction/Expansions/Complete Replacements:**
  - New facilities
  - Remodeling or expansions to address capacity or new regulations
  - Thoroughfare construction
- **Major Maintenance**
  - Individual building systems
  - Bridge repairs
  - Street and alley reconstruction or resurfacing
  - Large water valve replacements
- **Ordinary/Preventive Maintenance – not bond fund eligible**
  - Painting
  - Plumbing repairs
  - Micro/slurry street treatment, pothole repairs



# Needs/Wants Inventory

- A running list of major maintenance/replacement and new construction - needs/wants
- Placed in inventory by:
  - Age, capacity, regulations, usefulness
  - Council
  - Public
  - Input received at town hall meetings
  - Technical criteria
  - Strategic plans (partnerships, grants)
  - Master plans
  - Economic development target areas
  - Land use plans
  - Maintenance history
- Continuously updated
- Ranked according to preset criteria prior to a bond program

# Inventory as of November 2013 - General Fund Infrastructure

<b>Proposition</b>	<b>Needs Inventory 2006</b>	<b>2006 BP Investment</b>	<b>2012 BP Investment</b>	<b>Current Needs Inventory</b>
Street and Transportation	\$3,171,795,000	\$390,420,000	\$260,625,000	\$4,419,903,000
Flood Protection & Storm Drainage	\$820,416,000	\$334,315,000	\$326,375,000	\$1,178,805,000
Park & Recreation	\$2,054,955,000	\$343,230,000	0	\$2,969,106,000
Library Facilities	\$136,724,000	\$46,200,000	0	\$90,477,000
Cultural Facilities	\$193,849,000	\$60,855,000	0	\$186,114,000
City Facilities	\$116,432,000	\$34,750,000	0	\$366,707,000
Courts Facilities	\$7,945,000	\$7,945,000	0	\$6,000,000
Public Safety Facilities Fire	\$178,243,000	\$56,720,000	0	\$164,696,000
Public Safety Facilities Police	\$101,444,000	\$6,905,000	0	\$183,090,000
Communication Facilities (radio network)*	N.A.	0*	0*	\$81,500,000
<b>Total</b>	<b>\$6,781,803,000</b>	<b>\$1,281,340,000</b>	<b>\$587,000,000</b>	<b>\$9,646,398,000</b>

\* Communication facilities – the City has been receiving grant funds for radio communication upgrades

# Inventory as of November 2013 - Enterprise Fund Infrastructure

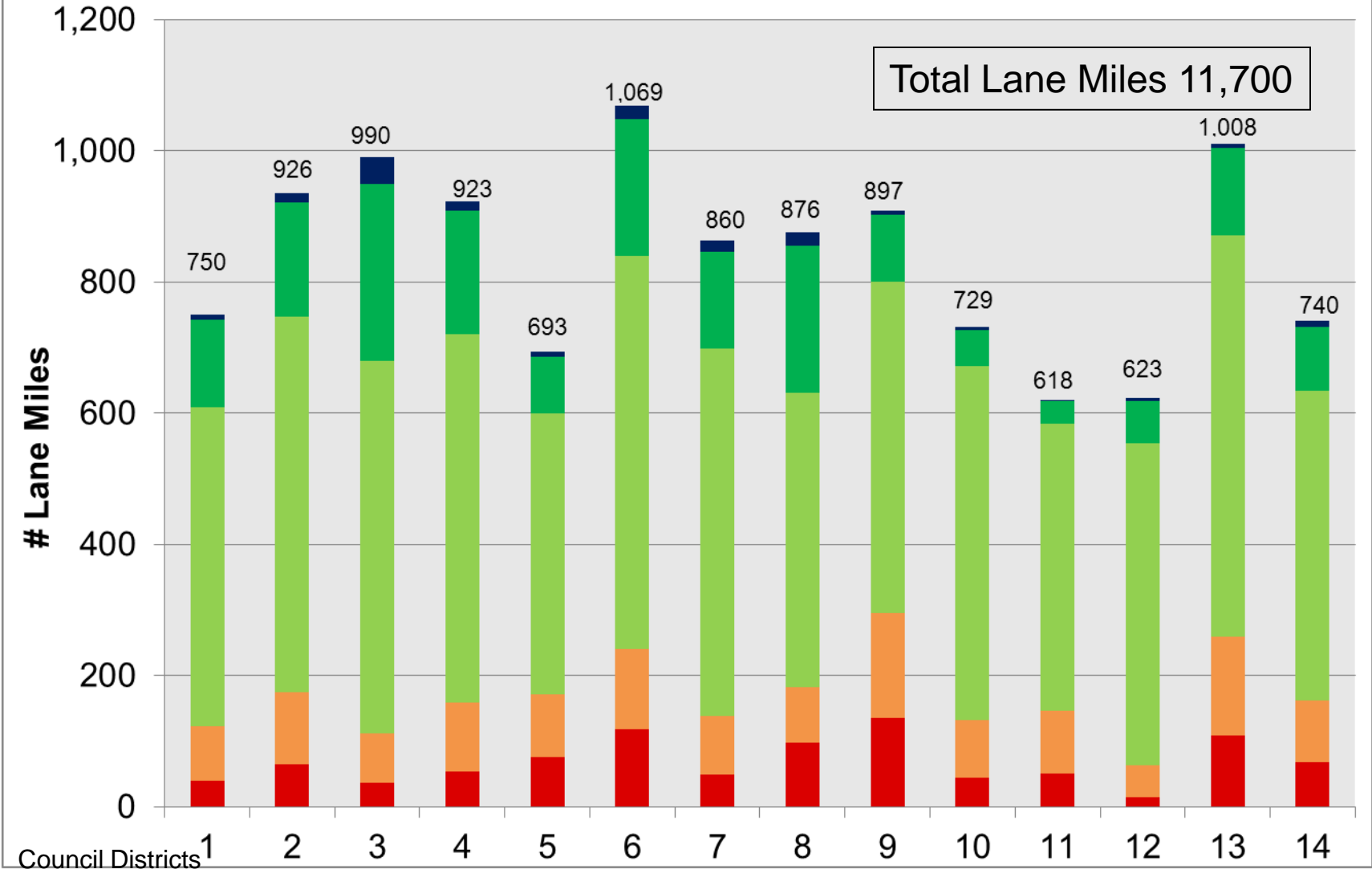
Category	Investment Since 2004	Current Need Inventory
<b>Dallas Water Utilities</b>		
Regulatory	\$319M	\$530M
Growth	\$740M	\$2,065M
Rehab/replacement	\$1,394M	\$1,648M
<b>Aviation</b>		
Love Field Modernization	\$419M	\$85M
Infrastructure and Major Maintenance	Pavement \$120M Garage \$60M Environmental \$5M Facilities \$14M	Drainage \$150M Airfield Pavement \$28 AVI Admin \$4M RBD \$33M New Parking Garage – TBD Consolidated Car Rental Center – TBD
Safety & Security	Access Control System \$6M Explosive Detection System \$9M	Perimeter Enhancement \$2M Aircraft Rescue Fire Fighting Truck \$1M
<b>Convention Center</b>	Capital Improvements \$59.9	\$101.8M

# Assessment of General Fund Infrastructure

- **Streets, Bridges & Alleys**
- Flood Protection and Storm Drainage
- City Hall, Cultural, Library, Public Safety & Service/Maintenance Facilities
- Park Facilities
- Radio Communication Facilities

# Street Conditions (Jan 2014)

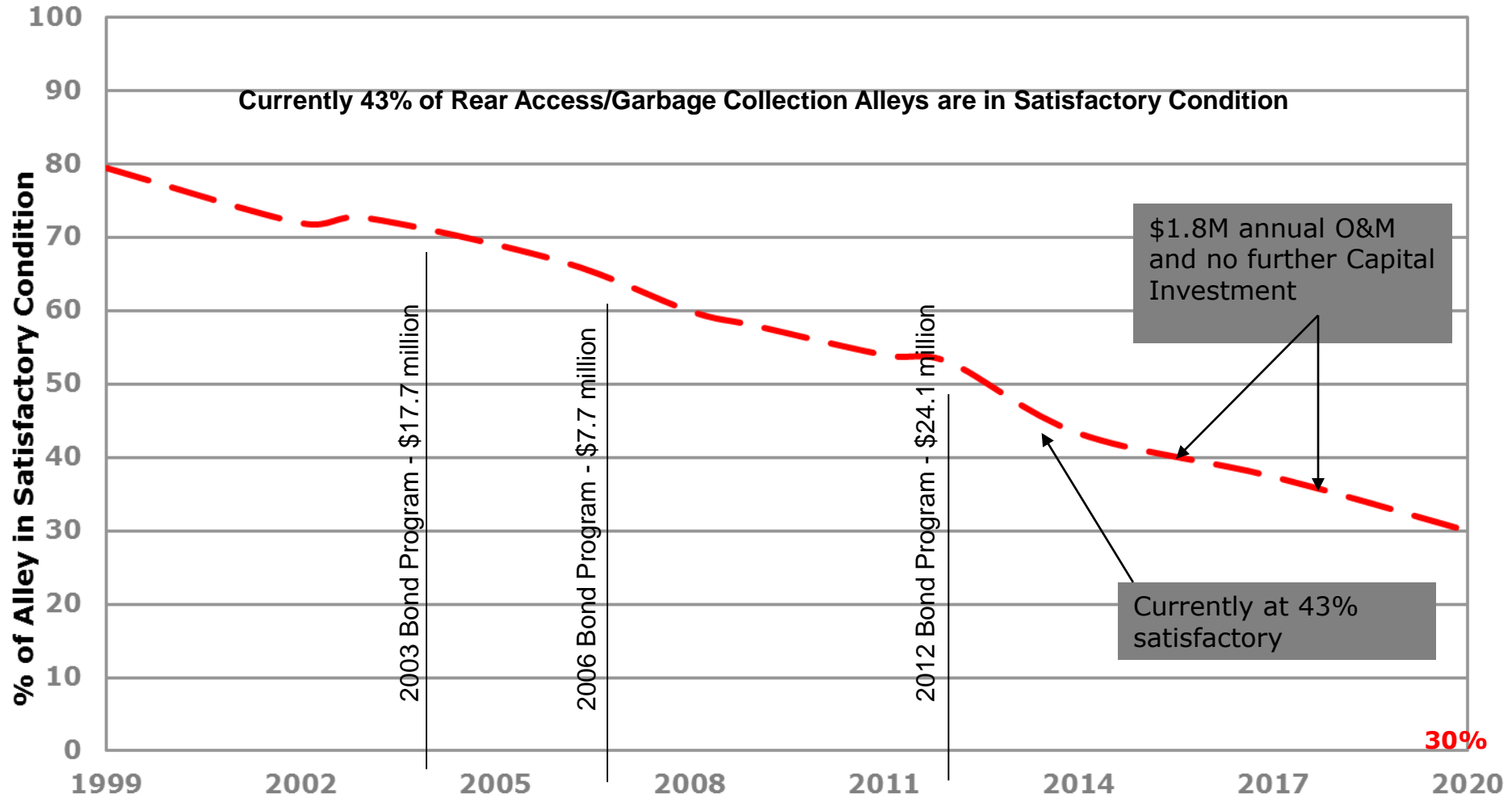
- Excellent
- Good
- Fair
- Poor
- Very Poor



Total Lane Miles 11,700

Citywide street condition rating is decreasing and is currently at 81.5% satisfactory level. **Additional funding of over \$900 million in the next four (4) years is needed to reach Council's 2006 goal of 87% overall street satisfaction rate**

# Alley Conditions



**Resulting Alley Condition in 2020 with flat O & M investment level and no additional capital investment beyond 2012 Bond Program. Over \$700 million is required to achieve 100% satisfactory level in 2020 for alleys with rear access/garbage & recycling collection**

# Assessment of General Fund Infrastructure

- Streets, Bridges & Alleys
- **Flood Protection and Storm Drainage**
- City Hall, Cultural, Library, Public Safety & Service/Maintenance Facilities
- Park Facilities
- Radio Communication Facilities

# Flood Protection & Storm Drainage Needs Inventory

Includes:

- Storm Drainage Relief System - Current Needs Inventory - \$511M
  - Provides additional drainage systems for areas served by undersized drainage systems
  - Upgrade and/or extension of storm drain systems
- Flood Management - Current Needs Inventory - \$656M
  - Includes recommendations from Flood Plain Management Studies
  - Bridge and culverts, swales, pump stations and voluntary purchases of flood prone properties
- Erosion Control - Current Needs Inventory - \$11M
  - Erosion control along creeks
  - Includes protection for streets, culverts, bridges, alleys and homes

**TOTAL \$1.18 Billion**

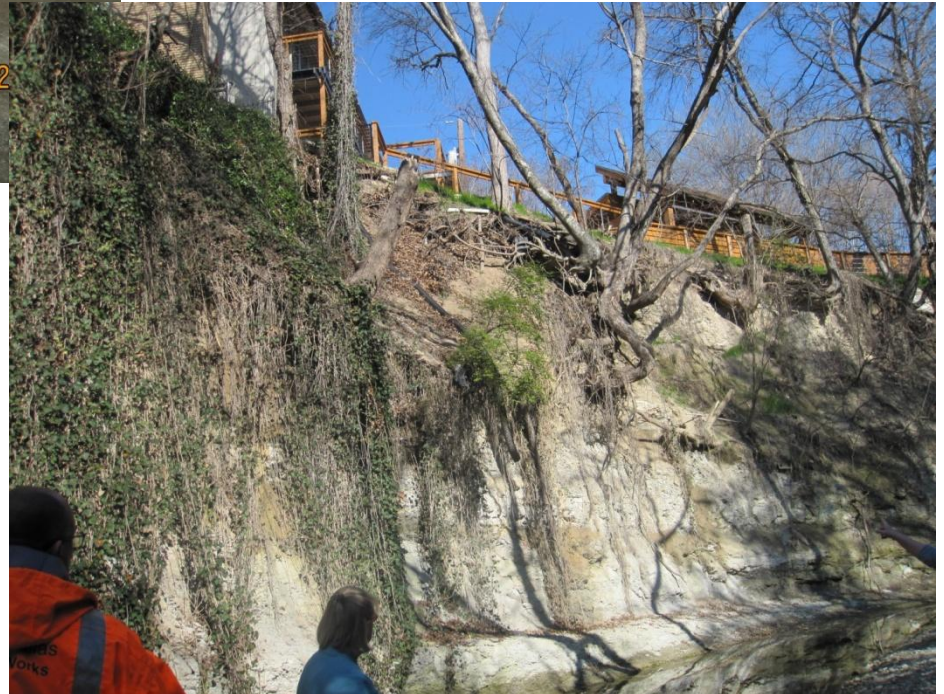




**Baker Pump Station - Under Construction  
Funded in the 2006 Bond Program**

02/05/2

**Erosion at Meadowcliff Road.**



# Assessment of General Fund Infrastructure

- Streets, Bridges & Alleys
- Flood Protection and Storm Drainage
- City Hall, Cultural, Library, Public Safety & Service/Maintenance Facilities
- Park Facilities
- Radio Communication Facilities

# City Facility Maintenance

The City owns or leases parts of 1,270 facilities

- Enterprise departments (616), the Dallas Zoo (128), Park and Recreation (105), and the Office of Cultural Affairs (22)
- Equipment and Building Services maintains all or parts of 785 City facilities
  - City Hall & Multi-departmental (42)
  - Code Compliance (15)
  - Courts (2)
  - Cultural Arts (22)
  - Fire-Rescue (70)
  - Flood Control (24)
  - Housing (27)
  - Information Services (15)
  - Libraries (28)
  - Park and Recreation (211)
  - Police (20)
  - Procurement (1)
  - Public Works (3)
  - Sanitation (14)
  - Street Services (38)
  - Water Utilities (253) funded by DWU

# City Facility Capital Improvements

## Current Needs inventory -

- City Hall & Multi-departmental (114)\* - \$366.7 M
- Courts (2) - \$ 6.0 M
- Cultural Arts (22) - \$186.1 M
- Fire-Rescue (70) - \$164.7 M
- Libraries (28) - \$ 90.5 M
- Police (20) - \$183.1 M
- Sanitation (14) - \$ 23.8 M

\*Additional Department facilities include: Code Compliance, Information Services, Procurement, Public Works and Street Services

# Assessment of General Fund Infrastructure

- Streets, Bridges & Alleys
- Flood Protection and Storm Drainage
- City Hall, Cultural, Library, Public Safety & Service/Maintenance Facilities
- **Park Facilities**
- Radio Communication Facilities

# Park and Recreation Department

- Over 23,018 park acres, including:
  - 13 lakes with 4,400 surface acres of water
  - 18,618 acres of park land
  - 115 miles of jogging and bike trails



- Leisure, recreational and cultural activities at:
  - 374 neighborhood, community and regional parks
  - 212 playgrounds
  - 321 multipurpose fields, 87 softball diamonds
  - 115 picnic pavilions
  - 10 spray grounds
  - 47 recreation centers
  - 30 baseball diamonds
  - 5 tennis centers -



- 258 tennis courts
- 128 soccer fields
- 87 softball diamonds
- 18 community pools
- 15 sandlots
- 12 football fields
- 6 18-hole golf courses
- 5 dog parks/dog runs



# Park and Recreation Department

- Needs are included in the following categories by type of project:

- Aquatics \$ 51.0M
  - Spray grounds
  - Pool Renovations
  - Family Aquatics Centers
- Code Compliance, Safety and Security \$ 5.43M
- Dallas Arboretum \$136.48M
- Dallas Zoo \$204.30M
- Downtown Parks \$ 63.18M
- Environmental Conservation \$ 77.49M
  - Erosion Control, Creek Stabilization and Dredging
- Fair Park \$335.93M
- Historic Restoration \$ 11.49M
- Land Acquisition \$289.43M
  - Sites for new facilities
  - Trail corridors
  - Open space



# Park and Recreation Department

– Major Recreational Facilities – Outdoor	\$203.94 M
• Major Athletic Complexes	
• Golf Courses	
• Tennis Centers	
• Skate Park	
– Partnership Match	\$ 2.43M
– Recreation Centers	\$338.39M
– Playground Replacement	\$ 5.71M
– Recreation Facilities Indoor	\$ 81.82M
– Service Facilities	\$ 25.99M
– Site Development	\$422.50M
• Athletic Fields	
• Lighting	
• Park Furnishings	
• Parking and Paving	
• Pavilions	
– Trail Development	\$189.52M
– Trinity River	\$486.70M



**Total: \$2.95B**



# Assessment of General Infrastructure

- Streets, Bridges & Alleys
- Flood Protection and Storm Drainage
- City Hall, Cultural, Library, Public Safety & Service/Maintenance Facilities
- Park Facilities
- **Radio Communication Facilities**

# Radio Communications Facilities

- Radio Communications facilities include:
  - Dawson Street Radio Communications Shop
    - Radio Shop Drive-in Service Center and Walk in Repair Center
    - Radio Network Monitoring Center
    - Hub for all City Radio Systems
  - Radio Communications
    - 15 City-owned radio towers with attached communications buildings and generators
    - 6 building top mounted sites with storage within the building
    - 2 City owned structures with storage at the base of the building
    - 2 are non-City owned sites

# Communication Infrastructure Needs inventory

- New Digital P25 Radio Communication Network + 3% of hardware & software cost for annual preventative maintenance - \$75M
- Upgrade remaining handheld/mobile radios (STS, SAN, Code, PKR, EBS, PWT, etc.) - \$6.5M
- Dawson building needs major renovation. This cost is included in the City Hall & Multi-departmental category

# Assessment of Enterprise Fund Infrastructure

- DWU water & wastewater pipeline & treatment plant
- Aviation Facilities
- Convention Center Facilities

# DWU Capital Program

## Assessment of the Enterprise Fund Infrastructure

- \$8+ billion replacement value of system
- Major capital improvements guided by:
  - master plans (growth)
  - regulatory changes
  - rehabilitation/replacement
- 10-year capital program - \$4.2 billion
  - management tool to facilitate timely, efficient, economical operation of the City's water system
  - Enables focus to available resources providing a safe, dependable water supply at demand levels meeting regulatory requirements
  - Central database of work program prior to CMO and City Council for annual approval
  - Typically funded by 80% debt and 20% cash (transfers to construction)
- Council approves Capital Program funding annually for following year

# DWU Capital Program Categories

## Rehab/Replacement – Regulatory - Growth

### Rehab/Replacement of infrastructure - \$1.6B

- Repair, relocate, rehab, or replace deteriorated water and wastewater mains
- Replace pumps, motors & electrical components at facilities
- Modify, rehabilitate or replace process equipment, structures & facilities

### Regulatory - comply w/ new & revised state & federal rules - \$530M

- Safe Drinking Water Act
- Dam Safety Act
- Homeland Security Requirements
- Discharge to Trinity River and Lakes
- Stage 2 Disinfection/Disinfectant By-Products Rule
- EPA Sludge Regulations
- Clean Water Act

### Growth - \$2.1B

- Increase water/wastewater treatment capacity to meet growth demands
- Enhance infrastructure to meet customer needs
- Connect additional reservoirs to increase usable supply
- Provide facilities to serve new customers
  - Transmission mains, pump stations, treated water storage tanks, peak flow basins, de-watering facilities

# Assessment of Enterprise Fund Infrastructure

- Water and wastewater pipeline & treatment plants
- **Aviation Facilities**
- Convention Center Facilities

# Aviation Department Infrastructure

- Aviation (AVI) currently undertaking complete analysis of infrastructure
- Current evaluations or recently completed:
  - Airfield Pavement Evaluation
  - Comprehensive Electrical Assessment
  - Garage A and B Condition Assessment
  - Drainage Master Plan
  - Good Neighbor Initiative
- Airport Master Plan of facilities being completed and will provide guide for future development



# Assessment of Enterprise Fund Infrastructure

- Water and wastewater pipeline & treatment plants
- Aviation Facilities
- **Convention Center Facilities**

# CES Infrastructure

- Convention Center Arena and Theater Completed in 1957.
- Exhibit Halls A & B, Ballroom & Admin Offices Completed in 1973
- Exhibit Hall C & Ballroom Completed in 1984
- Exhibit Halls D & E Completed in 1994
- Exhibit Hall F Completed in 2002
- 2.1M square feet campus
- Over one million square feet of exhibit space
- LEED Existing Building Silver Certification
- \$60M Capital improvement project underway
  - Renovating some existing meeting/ common space, roofing, life safety, and mechanical/electrical/plumbing systems.

# CES NEEDS ASSESSMENT

- Back Of House Critical Infrastructure - \$14.4M
  - Mechanical and Electrical replacements
  - Cooling Tower/Chiller/Boiler Replacements
  - Code infrastructure requirements
- Interior Finishes and Vertical Circulation - \$76.3M
  - Replace worn and outdated finishes to current industry expectations
  - Escalator Replacement/Elevator modernization
- Audio, Visual/Telecommunications and Security Systems - \$11.1M
  - Replace/Upgrade In-House Installed Equipment
  - Repair/Replace /Add Updated cameras & recording equipment
- Furniture, Fixtures, Equipment - \$8.7M
  - Replace Outdated and Damaged Equipment including chairs, tables, lecterns, and staging
- Study is underway to determine the cost for additional meeting rooms and ballroom space.

# Process to Address Infrastructure Issues

Staff will present a series of briefings over the next year on the condition of the City's infrastructure. Briefing will include:

- Streets – (scheduled for April 2<sup>nd</sup>)
- Alleys
- Libraries
- Cultural Facilities
- City Facilities
- Radio Communication Facilities
- Flood protection & storm drainage
- Courts and Public Safety Facilities (Fire and Police)

Briefings will also address the issues raised on the next page.

# Addressing Issues/Determining Policy

- Determine true priorities: Needs vs Wants
- Construct new vs. maintain existing buildings
- Lease vs own facilities
- Reduce the number of facilities by selling, partnering or closing them
- Revisit previous Council goals, such as street satisfactory condition
- Re-purpose facilities or the method by which services are delivered

# Addressing Issues/Determining Policy

- Develop long and short term strategies for:
  - Financing infrastructure needs
  - Life cycle replacement program
- Financing Options:
  - Facility privatization
  - Implement impact fees
  - Increase storm water fees
  - Examine a dedication tax rate for streets
  - Charge more for facility rental or use
  - Greater reliance on donations and grants

# Questions & Comments